

**FINANCIAL ASSISTANCE  
FUNDING OPPORTUNITY ANNOUNCEMENT**



**U.S. Department of Energy  
Office of Science**

**Accelerating Delivery of Petascale Computing Environment  
At the DOE Leadership Computing Facility at the  
Oak Ridge National Laboratory**

**Funding Opportunity Number: DE-PS02-06ER06-26**

**Announcement Type: Initial**

**CFDA Number: 81.049**

**Issue Date: 08/15/2006**

**Letter of Intent Due Date: Not Applicable**

**Pre-Application Due Date: Not Applicable**

**Application Due Date: 10/11/2006 at 8:00 PM Eastern Time**

**Program Managers: Walt Polansky and Barbara Helland  
Advanced Scientific Computing Research**

**Phone Number: 301-903-5800**

**Email: [Walt.Polansky@science.doe.gov](mailto:Walt.Polansky@science.doe.gov)  
[Barbara.Helland@science.doe.gov](mailto:Barbara.Helland@science.doe.gov)**

## **NOTE: NEW REQUIREMENTS FOR GRANTS.GOV**

### **Where to Submit**

Applications must be submitted through Grants.gov to be considered for award.

### **Registration Requirements**

There are several one-time actions you must complete in order to submit an application through Grants.gov (e.g., obtain a Dun and Bradstreet Data Universal Numbering System (DUNS) number, register with the Central Contract Registry (CCR), register with the credential provider, and register with Grants.gov). See <http://www.grants.gov/GetStarted>. Use the Grants.gov Organization Registration Checklist at <http://www.grants.gov/assets/OrganizationRegCheck.doc> to guide you through the process. Designating an E-Business Point of Contact (EBiz POC) and obtaining a special password called an MPIN are important steps in the CCR registration process. Applicants who are not registered with CCR and Grants.gov should allow at least 14 days to complete these requirements. It is suggested that the process be started as soon as possible.

### **Questions**

Questions relating to the registration process, system requirements, how an application form works, or the submittal process must be directed to Grants.gov at 1-800-518-4726 or [support@grants.gov](mailto:support@grants.gov). Part VII of this announcement explains how to submit other questions to the Department of Energy (DOE).

### **Application Receipt Notices**

After an application is submitted, the Authorized Organization Representative (AOR) will receive a series of four e-mails. It is extremely important that the AOR watch for and save each of the emails. It may take up to two (2) business days from application submission to receipt of email Number 2. You will know that your application has reached DOE when the AOR receives email Number 4. You will need the Submission Receipt Number (email Number 1) to track a submission. The titles of the four e-mails are:

Number 1 - Grants.gov Submission Receipt Number

Number 2 - Grants.gov Submission Validation Receipt for Application Number

Number 3 - Grants.gov Grantor Agency Retrieval Receipt for Application Number

Number 4 - Grants.gov Agency Tracking Number Assignment for Application Number

### **VERY IMPORTANT – Download PureEdge Viewer**

In order to download the application package, you will need to install PureEdge Viewer. This small, free program will allow you to access, complete, and submit applications electronically and securely. For a free version of the software, visit the following web site:

<http://www.grants.gov/DownloadViewer>.

## **TABLE OF CONTENTS**

### **PART I – FUNDING OPPORTUNITY DESCRIPTION**

- A. (Optional)**
- B. (Optional)**
- C. (Optional)**
- D. (Optional)**
- E. (Optional)**

### **PART II – AWARD INFORMATION**

- A. Type of Award Instrument**
- B. Estimated Funding**
- C. Maximum and Minimum Award Size**
- D. Expected Number of Awards**
- E. Anticipated Award Size**
- F. Period of Performance**
- G. Type of Application**

### **PART III – ELIGIBILITY INFORMATION**

- A. Eligible Applicants**
- B. Cost Sharing or Matching**
- C. Other Eligibility Requirements**

### **PART IV – APPLICATION AND SUBMISSION INFORMATION**

- A. Address to Request Application Package**
- B. Letter of Intent and Pre-Application**
- C. Content and Form of Application**
- D. Submissions from Successful Applicants**
- E. Submission Dates and Times**
- F. Intergovernmental Review**
- G. Funding Restrictions**
- H. Other Submission and Registration Requirements**

### **PART V – APPLICATION REVIEW INFORMATION**

- A. Criteria**
- B. Review and Selection Process**
- C. Anticipated Notice of Selection and Award Dates**

### **PART VI – AWARD ADMINISTRATION INFORMATION**

- A. Award Notices**
- B. Administrative and National Policy Requirements**
- C. Reporting**

### **PART VII – QUESTIONS/AGENCY CONTACTS**

- A. Questions**
- B. Agency Contacts**

**PART VIII – OTHER INFORMATION**

- A. Modifications**
- B. Government Right to Reject or Negotiate**
- C. Commitment of Public Funds**
- D. Proprietary Application Information**
- E. Evaluation and Administration by Non-Federal Personnel**
- F. Intellectual Property Developed under this Program**
- G. Notice of Right to Request Patent Waiver**
- H. Notice Regarding Eligible/Ineligible Activities**
- I. Reference Material**

## **PART I – FUNDING OPPORTUNITY DESCRIPTION**

**SUMMARY** - The Office of Science (SC), U.S. Department of Energy (DOE), hereby announces interest in receiving applications for projects in the Advanced Scientific Computing Research program to accelerate delivery of a petascale computing environment to meet scientific computational needs. Many challenges of multi-scale, multi-disciplinary problems now facing science programs in DOE require advanced modeling and simulation capabilities of petascale computers. This Notice is seeking applications that contribute to the creation of Computational End Stations or the development of Computational Environments.

**Computational End Stations:** The creation of Computational End Stations will provide the scientific applications software and world-class computational specialists needed for researchers in science and/or engineering to take full advantage of the extraordinary capabilities provided by the Leadership Computing Facility (LCF) at Oak Ridge National Laboratory (ORNL) (see supplementary information). This concept is described in the report produced by the High-End Computing Revitalization Task Force Workshop, which notes that “establishing Computational End Stations is one integrated solution to the needs of developers and users.... Application codes and their associated analysis tools are the instruments of computational science.”

Each Science/Engineering End Station team will be responsible for:

- Creating, maintaining, evolving, and supporting the suite of capability computational codes needed to advance the scientific research program proposed for this End Station and the represented research field.
- Executing the scientific research program laid out in their Computational End Station proposal.
- Providing outreach to their research community through workshops, web portals, and other mechanisms.

**Computational Environment:** A comprehensive, scientific computing software infrastructure that fully integrates applied mathematics, computer science, and computational science in the physical, biological, and environmental sciences for scientific discovery is required at the petascale level.

Applications are sought that:

- Create or adapt existing scientific simulation codes to achieve high single node performance; scale to thousands of nodes and tens-of-thousands of processors; and be readily portable to other computer architectures.
- Integrate computational science focused on the petascale with discipline-driven applications through teaming and partnerships with computer scientists and applied mathematicians through mechanisms and innovative approaches that include:

Algorithms, methods and libraries fully scalable to many thousands of processors with full performance portability.

Component-based, fully integrated, terascale and petascale program development and tools, which scale effectively and provide maximum utility and ease-of-use to developers and scientific end users.

Systems software that scale to hundreds-of-thousands of processors, support high performance application-level communication, I/O, performance analysis and optimization, and provide the highest levels of fault tolerance, reliability, manageability, and ease of use for end users, tool developers and system administrators.

Scalable, intuitive systems fully supportive of SciDAC see: (<http://www.scidac.org>) application requirements for moving, storing, analyzing, querying, manipulating and visualizing multi-petabytes of scientific data and objects.

It is expected that applications submitted in response to this notice will be:

- for scientific simulation teams involving more than one university, industry or non-profit organization. **(Note- Federal Laboratories (FL) and Federally Funded Research and Development Centers (FFRDCs) are not eligible for award under this Notice. )**
- focused on the goals of either the Computational Endstations or Computational Environments

Applications must describe the computational approach for interacting with the Leadership Computing Facility at Oak Ridge National Laboratory. At a minimum, this description should include:

- Programming languages, libraries, and other software used.
- Description of the underlying mathematical formulation (e.g., ODE, PDE).
- Algorithms and numerical techniques employed (e.g., finite element, iterative solver).
- Parallel programming system used (e.g., MPI, OpenMP, "embarrassingly" parallel).
- Evidence that the principal computational codes to be used in this project will make effective use of the LCF at ORNL.
- For data-intensive applications, describe the data storage and transfer requirements.

## **SUPPLEMENTARY INFORMATION:**

### **Background: Leadership Computing at ORNL**

The Leadership Computing Facility at Oak Ridge National Laboratory has become a unique world-class scientific resource that provides the scientific community with orders of magnitude more computing capability (performance, memory, etc.) than is now available. While

establishing this new level of scientific capability for the Nation, the LCF proactively engages the scientific and engineering communities and issues calls for applications to realize the breakthroughs promised by its extraordinary capabilities. Currently, LCF at ORNL houses two different systems purpose-built for science – an 18.5TF Cray X1E scalable vector system and a 25TF Cray XT3 super scalar system. It is planned that the Cray XT3 will be upgraded to 250+ TF in 2007 and a new 1000TF Cray Baker system will be deployed in 2008.

LCF continues to leverage the substantial number of core system and applications software packages and kernels currently being developed and optimized for the XT3 and Red Storm systems under DOE-SC and DOE-NNSA sponsorship, as well as the growing base of application from other Cray XT3 customers.

The allocation of computing resources available to individual projects will not be part of this solicitation but will be contingent on review and award through the process as described at: <http://hpc.science.doe.gov/>. Within the available computational resources, every effort will be made to ensure that successful applications will have the resources needed to support their efforts.

## **PART II – AWARD INFORMATION**

### **A. TYPE OF AWARD INSTRUMENT.**

DOE anticipates awarding grants under this program announcement.

### **B. ESTIMATED FUNDING.**

It is anticipated that approximately \$5,000,000, from the Office of Science's Office of Advanced Scientific Computing Research (ASCR) program, will be available to support these new projects, subject to the availability of funds. The number of awards will be determined by the number of excellent applications received and the total funds available for this program. DOE is under no obligation to pay for any costs associated with the preparation or submission of applications.

### **C. MAXIMUM AND MINIMUM AWARD SIZE.**

Ceiling (i.e., the maximum amount for an individual award made under this announcement):  
\$2,000,000

Floor (i.e., the minimum amount for an individual award made under this announcement):  
None

### **D. EXPECTED NUMBER OF AWARDS.**

Awards are anticipated to fall in two categories: Computational Endstations and Computational Environments. It is anticipated that no more than three awards will be made. Applications may request up to \$2,000,000 in total funding. However, the project period shall not exceed 24 months. There are no funds available within the ASCR program to continue projects beyond the project period.

### **E. ANTICIPATED AWARD SIZE.**

N/A

### **F. PERIOD OF PERFORMANCE.**

N/A

### **G. TYPE OF APPLICATION.**

N/A



### **PART III - ELIGIBILITY INFORMATION**

#### **A. ELIGIBLE APPLICANTS.**

All types of applicants are eligible to apply except other Federal agencies, Federally Funded Research and Development Center (FFRDC) Contractors, and non-profit organizations described in section 501(c)(4) of the Internal Revenue Code of 1986 that engaged in lobbying activities after December 31, 1995.

#### **B. COST SHARING**

Cost sharing is not required.

#### **C. OTHER ELIGIBILITY REQUIREMENTS.**

N/A

## **PART IV – APPLICATION AND SUBMISSION INFORMATION**

### **A. ADDRESS TO REQUEST APPLICATION PACKAGE.**

Application forms and instructions are available at Grants.gov. To access these materials, go to <http://www.grants.gov>, select “Apply for Grants,” and then select “Download Application Package.” Enter the CFDA and/or the funding opportunity number located on the cover of this announcement and then follow the prompts to download the application package. **NOTE:** You will not be able to download the Application Package unless you have installed PureEdge Viewer (See: <http://www.grants.gov/DownloadViewer>).

### **B. LETTER OF INTENT AND PRE-APPLICATION.**

#### **1. Letter of Intent.**

Letters of Intent are not required.

#### **2. Pre-Application.**

Pre-Applications are not required.

### **C. CONTENT AND FORM OF APPLICATION – SF 424**

You must complete the mandatory forms and any applicable optional forms (e.g., SF-LLL-Disclosure of Lobbying Activities) in accordance with the instructions on the forms and the additional instructions below. **Files that are attached to the forms must be in Adobe Portable Document Format (PDF) unless otherwise specified in this announcement.**

#### **1. SF 424 (R&R)**

Complete this form first to populate data in other forms. Complete all the required fields in accordance with the pop-up instructions on the form. To activate the instructions, turn on the “Help Mode” (Icon with the pointer and question mark at the top of the form). The list of certifications and assurances referenced in Field 18 can be found on the Applicant and Recipient Page at <http://grants.pr.doe.gov>.

#### **2. RESEARCH AND RELATED Other Project Information.**

Complete questions 1 through 5 and attach files. The files must comply with the following instructions:

##### **Project Summary/Abstract (Field 6 on the Form)**

The project summary/abstract must contain a summary of the proposed activity suitable for dissemination to publication. It should be a single page that identifies the name of the applicant, the project director/principal investigator(s), the project title, the objectives of the project, a description of the project, including methods to be employed, the potential impact of the project (i.e., benefits, outcomes), and major

participants (for collaborative projects). This document must not include any proprietary or sensitive business information as the Department may make it available to the public. The project summary must not exceed one page when printed using standard 8.5" by 11" paper with 1" margins (top, bottom, left and right) with font not smaller than 11 point. To attach a Project Summary/Abstract, click "Add Attachment."

**Project Narrative (Field 7 on the form)**

The project narrative must not exceed 20 pages, including charts, graphs, maps, photographs, and other pictorial presentations, when printed using standard 8.5" by 11" paper with 1 inch margins (top, bottom, left, and right). The font must not be smaller than 11 point. Do not include any Internet addresses (URLs) that provide information necessary to review the application, because the information contained in these sites will not be reviewed. **All applications should be in a single PDF file.** To attach a Project Narrative, click "Add Attachment."

The Research & Related Other Project Information form of the Grants.gov template should be completed in the following manner. **Project Narrative is Field 7 on the form.** The first page of your narrative must include the following information:

**Applicant/Institution:**

**Street Address/City/State/Zip:**

**Principal Investigator:**

**Address:**

**Telephone Number:**

**Email:**

**DOE/Office of Science Program Office:**

**DOE/Office of Science Program Office Technical Contact:**

Is this a Collaboration? If yes, please list ALL Collaborating Institutions/Pis and indicate which ones will also be submitting applications. Also indicate the PI who will be the point of contact and coordinator for the combined research activity.

\* Note that collaborating applications must be submitted separately.

**Biographical Sketches**

**Current and Pending Support** for each senior investigator

**Letters of Intent** from collaborators (if applicable)

**Facilities and Resources** description

**Literature Cited**

The project narrative must include: **(and any other items as listed in the Funding Opportunity Description above)**

- Project Objectives.

This section should provide a clear, concise statement of the specific objectives/aims of the proposed project.

- Evaluation Phase

This section must include a plan and metrics to be used to assess the success of the project.

- Project Performance Site

Indicate the primary site where the work will be performed. If a portion of the work will be performed at any other sites, identify those sites, also.

- Biographical Sketch Appendix

Provide a biographical sketch for the project director/principal investigator (PD/PI) and each senior/key person listed in Section A on the R&R Budget form. **Provide the biographical sketch information as an appendix to your project narrative. Do not attach a separate file.** The biographical sketch appendix will not count in the project narrative page limitation. The biographical information for each person must not exceed 2 pages when printed on 8.5" by 11" paper with 1 inch margins (top, bottom, left, and right) with font not smaller than 11 point and must include:

*Education and Training.* Undergraduate, graduate and postdoctoral training, provide institution, major/area, degree and year.

*Research and Professional Experience:* Beginning with the current position list, in chronological order, professional/academic positions with a brief description.

*Publications.* Provide a list of up to 10 publications most closely related to the proposed project. For each publication, identify the names of all authors (in the same sequence in which they appear in the publication), the article title, book or journal title, volume number, page numbers, year of publication, and website address if available electronically.

Patents, copyrights and software systems developed may be provided in addition to or substituted for publications.

*Synergistic Activities.* List no more than 5 professional and scholarly activities related to the effort proposed.

- Identification of Potential Conflicts of Interest or Bias in Selection of

Reviewers. Provide the following information in this section:

Collaborators and Co-editors: List in alphabetical order all persons, including their current organizational affiliation, who are, or who have been, collaborators or co-authors with you on a research project, book or book article, report, abstract, or paper during the 48 months preceding the submission of this application. Also, list any individuals who are currently, or have been, co-editors with you on a special issue of a journal, compendium, or conference proceedings during the 24 months preceding the submission of this application. If there are no collaborators or co-editors to report, state "None."

Graduate and Postdoctoral Advisors and Advisees: List the names and current organizational affiliations of your graduate advisor(s) and principal postdoctoral sponsor(s) during the last 5 years. Also, list the names and current organizational affiliations of your graduate students and postdoctoral associates during the past 5 years.

- Current and Pending Support.

Provide a list of all current and pending support (both Federal and non-Federal) for the Project Director/Principal Investigator(s) (PD/PI) and senior/key persons, including subawardees, for ongoing projects and pending applications. For each organization providing support, show the total award amount for the entire award period (including indirect costs) and the number of person-months per year to be devoted to the project by the senior/key person. Concurrent submission of an application to other organizations for simultaneous consideration will not prejudice its review.

**Bibliography & References Cited (Field 8 on the form)**

Provide a bibliography of any references cited in the Project Narrative. Each reference must include the names of all authors (in the same sequence in which they appear in the publication), the article and journal title, book title, volume number, page numbers, and year of publication. Include only bibliographic citations. Applicants should be especially careful to follow scholarly practices in providing citations for source materials relied upon when preparing any section of the application. **In order to reduce the number of files attached to your application, please provide the Bibliography and References Cited information as an appendix to your project narrative. Do not attach a file in field 8.** This appendix will not count in the project narrative page limitation.

**Facilities & Other Resources (Field 9 on the form)** This information is used to assess the capability of the organizational resources, including subawardee resources, available to perform the effort proposed. Identify the facilities to be used (Laboratory, Animal, Computer, Office, Clinical and Other). If appropriate, indicate their capacities, pertinent capabilities, relative proximity, and extent of availability to

the project. Describe only those resources that are directly applicable to the proposed work. Describe other resources available to the project (e.g., machine shop, electronic shop) and the extent to which they would be available to the project. **In order to reduce the number of files attached to your application, please provide the Facility and Other Resource information as an appendix to your project narrative. Do not attach a file in field 9.** This appendix will not count in the project narrative page limitation.

**Equipment (Field 10 on the form)**

List major items of equipment already available for this project and, if appropriate identify location and pertinent capabilities. **In order to reduce the number of files attached to your application, please provide the Equipment information as an appendix to your project narrative. Do not attach a file in field 10.** This appendix will not count in the project narrative page limitation.

**Other Attachment (Field 11 on the form)**

If you need to elaborate on your responses to questions 1-5 on the “Other Project Information” document, **provide the information as an appendix to your project narrative. Do not attach a file in field 11.**

**3. RESEARCH AND RELATED BUDGET.**

Complete the Research and Related Budget form in accordance with the instructions on the form (Activate Help Mode to see instructions) and the following instructions. You must complete a separate budget for each year of support requested. The form will generate a cumulative budget for the total project period. You must complete all the mandatory information on the form before the NEXT PERIOD button is activated. You may request funds under any of the categories listed as long as the item and amount are necessary to perform the proposed work, meet all the criteria for allowability under the applicable Federal cost principles, and are not prohibited by the funding restrictions in this announcement (See PART IV, G).

**Budget Justification (Field K on the form).**

Provide the required supporting information for the following costs (See R&R Budget instructions): equipment; domestic and foreign travel; participant/trainees; material and supplies; publication; consultant services; ADP/computer services; subaward/consortium/contractual; equipment or facility rental/user fees; alterations and renovations; and indirect cost type. Provide any other information you wish to submit to justify your budget request. If cost sharing is required, provide an explanation of the source, nature, amount and availability of any proposed cost sharing. Attach a single budget justification file for the entire project period in Field K. The file automatically carries over to each budget year.

**4. R&R SUBAWARD BUDGET ATTACHMENT(S) FORM.**

**Budgets for Subawardees, other than DOE FFRDC Contractors.** You must provide a separate cumulative R&R budget for each subawardee that is expected to perform work estimated to be more than \$100,000 or 50 percent of the total work effort (whichever is less). If you are selected for award, you must submit a multi-year budget for each of these subawardee (See Section IV.D for submission of Subawardees' multi-year budgets). Download the R&R Budget Attachment from the R&R SUBAWARD BUDGET ATTACHMENT(S) FORM and e-mail it to each subawardee that is required to submit a separate budget. Note: Subawardees must have installed PureEdge Viewer before they can complete the form. After the Subawardee has e-mailed its completed budget back to you, attach it to one of the blocks provided on the form. Use up to 10 letters of the subawardee's name (plus .xhd) as the file name (e.g., ucla.xhd or energyres.xhd).

- 5. SF-LLL Disclosure of Lobbying Activities** If applicable, complete SF- LLL. Applicability: If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the grant/cooperative agreement, you must complete and submit Standard Form - LLL, "Disclosure Form to Report Lobbying."

#### **D. SUBMISSIONS FROM SUCCESSFUL APPLICANTS.**

The Department anticipates that no additional submissions will be required. However, it reserves the right to request additional or clarifying information for any reason deemed necessary.

#### **E. SUBMISSION DATES AND TIMES.**

##### **Letters of Intent.**

Letters of Intent are not required.

##### **Pre-application Due Date.**

Pre-applications are not required.

##### **Application Due Date.**

Applications must be received by October 11, 2006, no later than 8:00 PM Eastern Time. You are encouraged to transmit your application well before the deadline. APPLICATIONS RECEIVED AFTER THE DEADLINE WILL NOT BE REVIEWED OR CONSIDERED FOR AWARD.

This program is subject to Executive Order 12372 (Intergovernmental Review of Federal Programs) and the regulations at 10 CFR Part 1005.

One of the objectives of the Executive order is to foster an intergovernmental partnership and a strengthened federalism. The Executive order relies on processes developed by State and local governments for coordination and review of proposed Federal financial assistance.

Applicants should contact the appropriate State Single Point of Contact (SPOC) to find out about, and to comply with, the State's process under Executive Order 12372. The names and addresses of the SPOCs are listed on the Web site of the Office of Management and Budget at <http://www.whitehouse.gov/omb/grants/spoc.html>.

#### **G. FUNDING RESTRICTIONS.**

Cost Principles. Costs must be allowable in accordance with the applicable Federal cost principles referenced in 10 CFR part 600.

Pre-award Costs. Recipients may charge to an award resulting from this announcement pre-award costs that were incurred within the ninety (90) calendar day period immediately preceding the effective date of the award, if the costs are allowable in accordance with the applicable Federal cost principles referenced in 10 CFR part 600. Recipients must obtain the prior approval of the contracting officer for any pre-award costs that are for periods greater than this 90 day calendar period.

Pre-award costs are incurred at the applicant's risk. DOE is under no obligation to reimburse such costs if for any reason the applicant does not receive an award or if the award is made for a lesser amount than the applicant expected.

#### **H. OTHER SUBMISSION AND REGISTRATION REQUIREMENTS**

##### **1. Where to Submit.**

**APPLICATIONS MUST BE SUBMITTED THROUGH GRANTS.GOV TO BE CONSIDERED FOR AWARD.** Submit electronic applications through the "Apply for Grants" function at [www.Grants.gov](http://www.Grants.gov). If you have problems completing the registration process or submitting your application, call Grants.gov at 1-800-518-4726 or send an email to [support@grants.gov](mailto:support@grants.gov).

##### **2. Registration Process.**



You must COMPLETE the one-time registration process (all steps) before you can submit your first application through Grants.gov (See [www.grants.gov/GetStarted](http://www.grants.gov/GetStarted)). **We recommend that you start this process at least two weeks before the application due date.** It may take 14 days or more to complete the entire process. Use the Grants.gov Organizational Registration Checklists at: <http://www.grants.gov/assets/OrganizationRegCheck.doc> to guide you through the process. **IMPORTANT:** During the CCR registration process, you will be asked to designate an E-Business Point of Contact (EBIZ POC). The EBIZ POC must obtain a special password called “Marketing Partner identification Number” (MPIN).

## **Part V - APPLICATION REVIEW INFORMATION**

### **A. CRITERIA**

#### **1. Initial Review Criteria.**

Prior to a comprehensive merit evaluation, DOE will perform an initial review in accordance with 10 CFR 605.10(b).

#### **2. Merit Review Criteria.**

Applications will be subjected to scientific merit review (peer review) and will be evaluated against the following criteria, listed in descending order of importance as found in 10 CFR Part 605.10 (d), the Office of Science Research Financial Assistance Program:

1. Scientific and/or technical merit of the project;
2. Appropriateness of the proposed method or approach;
3. Competency of applicant's personnel and adequacy of proposed resources;
4. Reasonableness and appropriateness of the proposed budget.

### **B. REVIEW AND SELECTION PROCESS.**

#### **1. Merit Review.**

Applications will be subjected to formal merit review (peer review) and will be evaluated against the evaluation criteria codified at 10 CFR 605.10(d) listed above, as well as the additional criteria listed above.

#### **2. Selection.**

The Selection Official will consider the merit review recommendation, program policy factors, and the amount of funds available.

#### **3. Discussions and Award.**

The Government may enter into discussions with a selected applicant for any reason deemed necessary, including but not limited to: (1) the budget is not appropriate or reasonable for the requirement; (2) only a portion of the application is selected for award; (3) the Government needs additional information to determine that the recipient is capable of complying with the requirements in 10 CFR part 600 and 605; and/or (4) special terms and conditions are required. Failure to resolve satisfactorily the issues identified by the Government will preclude award to the applicant.

**C. ANTICIPATED NOTICE OF SELECTION AND AWARD DATES.**

DOE is striving to make awards within eight months. The time interval begins on the date applications are due or the date the application is received, if there is no specified due date/deadline.

## **Part VI - AWARD ADMINISTRATION INFORMATION**

### **A. AWARD NOTICES.**

#### **1. Notice of Selection.**

DOE will notify applicants selected for award. This notice of selection is not an authorization to begin performance. (See Part IV.G with respect to the allowability of pre-award costs.)

Organizations whose applications have not been selected will be advised as promptly as possible. This notice will explain why the application was not selected.

#### **2. Notice of Award.**

A Notice of Financial Assistance Award issued by the contracting officer is the authorizing award document. It normally includes, either as an attachment or by reference: 1. Special Terms and Conditions; 2. Applicable program regulations, if any; 3. Application as approved by DOE; 4. DOE assistance regulations at 10 CFR part 600, or, for Federal Demonstration Partnership (FDP) institutions, the FDP terms and conditions; 5. National Policy Assurances To Be Incorporated As Award Terms; 6. Budget Summary; and 7. Federal Assistance Reporting Checklist, which identifies the reporting requirements.

### **B. ADMINISTRATIVE AND NATIONAL POLICY REQUIREMENTS.**

#### **1. Administrative Requirements.**

The administrative requirements for DOE grants and cooperative agreements are contained in 10 CFR part 600 and 10 CFR Part 605 (See: <http://ecfr.gpoaccess.gov>), except for grants made to Federal Demonstration Partnership (FDP) institutions. The FDP terms and conditions and DOE FDP agency specific terms and conditions are located on the National Science Foundation web site at [http://www.nsf.gov/awards/managing/fed\\_dem\\_part.jsp](http://www.nsf.gov/awards/managing/fed_dem_part.jsp).

#### **2. Special Terms and Conditions and National Policy Requirements.**

##### **Special Terms and Conditions and National Policy Requirements.**

The DOE Special Terms and Conditions for Use in Most Grants and Cooperative Agreements are located at <http://grants.pr.doe.gov>. The National Policy Assurances To Be Incorporated As Award Terms are located at <http://grants.pr.doe.gov>.

##### **Intellectual Property Provisions.**

The standard DOE financial assistance intellectual property provisions applicable to the various types of recipients are located at [http://www.gc.doe.gov/techtrans/sipp\\_matrix.html](http://www.gc.doe.gov/techtrans/sipp_matrix.html).

**C. REPORTING.**

Reporting requirements are identified on the Federal Assistance Reporting Checklist, DOE F 4600.2, attached to the award agreement.

## **PART VII - QUESTIONS/AGENCY CONTACTS**

### **A. QUESTIONS**

Questions regarding the content of the announcement must be submitted through the “Submit Question” feature of the DOE Industry Interactive Procurement System (IIPS) at <http://e-center.doe.gov>. Locate the program announcement on IIPS and then click on the “Submit Question” button. Enter required information. You will receive an electronic notification that your question has been answered. DOE will try to respond to a question within 3 business days, unless a similar question and answer have already been posted on the website.

Questions relating to the registration process, system requirements, how an application form works, or the submittal process must be directed to Grants.gov at 1-800-518-4726 or [support@grants.gov](mailto:support@grants.gov). DOE cannot answer these questions.

Questions regarding the program (**technical**) requirements must be directed to:

### **B. AGENCY CONTACTS:**

For Specific Information on DOE Interests, Contact:

Walt Polansky  
Office of Advanced Scientific Computing Research  
Office of Science  
SC-21.1/GTN Building  
U.S. Department of Energy  
1000 Independence Avenue, SW  
Washington, DC 20585-1290  
Telephone: 301-903-5800  
Email: [walt.polansky@science.doe.gov](mailto:walt.polansky@science.doe.gov)

Barbara Helland  
Office of Advanced Scientific Computing Research  
Office of Science  
SC-21.1/GTN Building  
U.S. Department of Energy  
1000 Independence Avenue, SW  
Washington, DC 20585-1290  
Telephone: 301-903-5800  
Email: [barbara.helland@science.doe.gov](mailto:barbara.helland@science.doe.gov)



## **PART VIII - OTHER INFORMATION**

### **A. MODIFICATIONS.**

Notices of any modifications to this announcement will be posted on Grants.gov and the DOE Industry Interactive Procurement System (IIPS). You can receive an email when a modification or an announcement message is posted by joining the mailing list for this announcement through the link in IIPS. When you download the application at Grants.gov, you can also register to receive notifications of changes through Grants.gov.

### **B. GOVERNMENT RIGHT TO REJECT OR NEGOTIATE.**

DOE reserves the right, without qualification, to reject any or all applications received in response to this announcement and to select any application, in whole or in part, as a basis for negotiation and/or award.

### **C. COMMITMENT OF PUBLIC FUNDS.**

The Contracting Officer is the only individual who can make awards or commit the Government to the expenditure of public funds. A commitment by other than the Contracting Officer, either explicit or implied, is invalid.

### **D. PROPRIETARY APPLICATION INFORMATION.**

Patentable ideas, trade secrets, proprietary or confidential commercial or financial information, disclosure of which may harm the applicant, should be included in an application only when such information is necessary to convey an understanding of the proposed project. The use and disclosure of such data may be restricted, provided the applicant includes the following legend on the first page of the project narrative and specifies the pages of the application which are to be restricted:

“The data contained in pages \_\_\_\_\_ of this application have been submitted in confidence and contain trade secrets or proprietary information, and such data shall be used or disclosed only for evaluation purposes, provided that if this applicant receives an award as a result of or in connection with the submission of this application, DOE shall have the right to use or disclose the data herein to the extent provided in the award. This restriction does not limit the government’s right to use or disclose data obtained without restriction from any source, including the applicant.”

To protect such data, each line or paragraph on the pages containing such data must be specifically identified and marked with a legend similar to the following:

“The following contains proprietary information that (name of applicant) requests not be released to persons outside the Government, except for purposes of review and evaluation.”

### **E. EVALUATION AND ADMINISTRATION BY NON-FEDERAL PERSONNEL.**

In conducting the merit review evaluation, the Government may seek the advice of qualified non-Federal personnel as reviewers. The Government may also use non-Federal personnel to conduct routine, nondiscretionary administrative activities. The applicant, by submitting its



application, consents to the use of non-Federal reviewers/administrators. Non-Federal reviewers must sign conflict of interest and non-disclosure agreements prior to reviewing an application. Non-Federal personnel conducting administrative activities must sign a non-disclosure agreement.

**F. INTELLECTUAL PROPERTY DEVELOPED UNDER THIS PROGRAM.**

Patent Rights. The government will have certain statutory rights in an invention that is conceived or first actually reduced to practice under a DOE award. 42 U.S.C. 5908 provides that title to such inventions vests in the United States, except where 35 U.S.C. 202 provides otherwise for nonprofit organizations or small business firms. However, the Secretary of Energy may waive all or any part of the rights of the United States subject to certain conditions. (See “Notice of Right to Request Patent Waiver” in paragraph G below.)

Rights in Technical Data. Normally, the government has unlimited rights in technical data created under a DOE agreement. Delivery or third party licensing of proprietary software or data developed solely at private expense will not normally be required except as specifically negotiated in a particular agreement to satisfy DOE’s own needs or to insure the commercialization of technology developed under a DOE agreement.

**G. NOTICE OF RIGHT TO REQUEST PATENT WAIVER.**

Applicants may request a waiver of all or any part of the rights of the United States in inventions conceived or first actually reduced to practice in performance of an agreement as a result of this announcement, in advance of or within 30 days after the effective date of the award. Even if such advance waiver is not requested or the request is denied, the recipient will have a continuing right under the award to request a waiver of the rights of the United States in identified inventions, i.e., individual inventions conceived or first actually reduced to practice in performance of the award. Any patent waiver that may be granted is subject to certain terms and conditions in 10 CFR 784.

Domestic small businesses and domestic nonprofit organizations will receive the patent rights clause at 37 CFR 401.14, i.e., the implementation of the Bayh-Dole Act. This clause permits domestic small business and domestic nonprofit organizations to retain title to subject inventions. Therefore, small businesses and nonprofit organizations do not need to request a waiver.

**H. NOTICE REGARDING ELIGIBLE/INELIGIBLE ACTIVITIES**

N/A

**I. REFERENCE MATERIAL**

N/A